

Reply to Domínguez-Rosado *et al.*

Sir,

We thank Domínguez-Rosado *et al.* for their thoughtful comments and questions with respect to our publication.¹ The primary objective of our study¹ was to ascertain the longterm health-related quality of life (HRQoL) of patients sustaining bile duct injuries on the basis of the available literature. The published literature was unclear in this regard; some studies demonstrated worse overall HRQoL and others showed no difference in HRQoL between persons who did and did not sustain bile duct injuries. The statistical approach of meta-analysis allowed for the pooling of information from these studies. We agree that heterogeneity of treatment across studies is an inherent limitation of this technique. As we discussed in our paper,¹ the patients reported in the six studies incorporated into this meta-analysis were treated with a variety of modalities (surgical, endoscopic and/or radiologic). The majority of these patients, however, were managed surgically and two of the studies^{1,2} included only surgical patients. It would not have been possible for us to employ a methodology based on meta-analysis and to exclude studies in order to achieve homogeneity of treatment. Rather, we opted to include all available studies in order to achieve maximal statistical power and representation.

The loss of patients from follow-up is an inherent limitation of longitudinal observational studies. Although it can be assumed that this patient population is generally similar to that of patients who complete follow-up, we agree that this is a difficult assumption. Both death and, conversely, successful outcome with no perceived need for ongoing follow-up may explain the lack of follow-up. Health-related QoL would certainly differ between these two groups. No study can address the outcomes of patients who are lost to follow-up.

The general or healthy population standards utilized in our study¹ were those reported for each of the HRQoL assessment

tools. For those studies using non-US samples, the population norms used in this meta-analysis were those reported in the specific study for non-US respondents.

Although we agree that this study¹ pools information from a heterogeneous set of reports, which is potentially why reported outcomes have differed, we feel it offers an important step forward as we work to further uncover the magnitude and duration of the effect of bile duct injuries on HRQoL. Again, we thank Domínguez-Rosado and his colleagues for their interest in our study.

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